

Michigan Critical Incident Management System (MI CIMS) & Disaster Management GIS



**Michigan State Police
Emergency Management and
Homeland Security Division**

Jaclyn Barcroft

Trevor Havelka

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Emergency Management & Homeland Security

- Involves preparing for, mitigating, responding to and recovering from emergencies, disasters or acts of terrorism.



State Emergency Operations Center

- What is an Emergency Operations Center? (EOC)
 - Facility & Concept
 - People
 - Equipment
 - Plans & Procedures
 - Training & Exercises



EOC Operations

- What does an Emergency Operations Center do?
 - Direction & Control
 - Communications
 - Public Information - Media Relations
 - Damage Assessment
 - Resource Management
 - Recovery



EOC Operations

- Operational Phases
 - Monitoring
 - Activation & Notification
 - Response Operations (Partial or Full)
 - Recovery
 - Demobilization (Debriefing/Close Out)



SEOC In Action



The Challenge

The challenges of Emergency Management & Homeland Security reinforce the need for effective cooperation and communication between many levels of government and a wide variety of agencies.



Michigan Critical Incident Management System (MI CIMS)

- The goal of the Michigan Critical Incident Management System (MI CIMS) is to provide the state of Michigan with a state-of-the art, web-based, secure, electronic information management system that supports:
 - Planning/Preparedness
 - Response
 - Recovery
 - Mitigation



Michigan Critical Incident Management System (MI CIMS)

- One common statewide CIMS software platform to share and document information during emergencies, disasters, planned events, and exercises
- Local, State, Federal, Tribal, Non-Governmental, Hospital, Private Sector Users
- No User Cost



Why Change?

- Previous CIMS software, E Team, was no longer supported by vendor
- Regional servers getting old – issues with Security & Notification
- Looking for new and improved technologies
- Wanting to customize the system to Michigan's specific needs



Goal: to Create the Best CIMS for Michigan

- September 2010 - Lean Process Improvement (LPI) Initiative
 - Team of local and state agencies
 - Define business requirements for an ideal CIMS
 - Improve process of entering/extracting data



Road to the New MI CIMS

- January 2012 - Request for Proposal (RFP) posted
 - Coordinated with DTMB to craft RFP
 - Response from 5 bidders
 - LPI Team reviewed proposals
 - Invited 3 bidders for oral presentations
 - April 2012 - New contract awarded to Intermedix for WebEOC®



Why WebEOC®?

- Many local, state, and federal agencies using WebEOC®
 - Share board ideas
 - Share data between systems
- Customizable
- New/Improved Technologies
- Cost



MI CIMS Implementation

- April 2012 – Onsite discovery
- May 2012 – Gap Analysis
- June 2012 – Design Document
- June/July 2012 – System Construction
- July 2012 – Process Validation
- July/Aug. 2012 – Testing
- Sept. 2012 – PARE
- Aug./Sept. 2012 – Initial Training
- Sept. 28, 2012 – System “Go Live”
- Oct.-Dec. 2012 – Training
- **Dec. 27, 2012 – Cutover from E Team**



MI CIMS Training Plan

- Intermedix (Aug. – Nov. 2012)
 - EMHSD Administrators
 - Trainer Overview
 - Train the Trainer (TTT) – Approximately 60
 - End User
- MI CIMS Trainers (Dec. 2012 – present)
 - Conducting weekly training sessions
 - Approximately 1,700 users trained
- Mi-TRAIN – Coordinate and track all MI CIMS training



Key Functions in MI CIMS

- Event reporting process – Significant Events
- EM Program Status
- Damage Assessment
- Incident Timeline
- Message Control
- Resource Request / Task Assignments
- Road Closures
- Shelters
- Resource Inventory
- After Action Reports



MI CIMS Mapper

- Plugin to MI CIMS
- Flex Application
- Content
 - Board
 - Base Maps
 - Import Shapefiles (saved locally)
 - Live Feeds
 - Widgets



MI CIMS Demo



MI CIMS Current Status

- System maintenance and administration
 - Enhancements to existing boards / functions
 - Creating new boards
- Continue training program
- Event and exercise support
- Enhance GIS capabilities



Future - WebFUSION

- Allows a WebEOC[®] server to communicate with other WebEOC[®] servers by acting as a communications hub to route messages to intended recipients
- Additional server, license, and hosting costs



Future Enhancements to Mapper

- Public Facing Web Server
 - ArcGIS Server
 - Upload Data
 - Raster/Vector
 - Javascript API (The Future)
 - Imbedded maps into boards
 - Damage Assessment
 - GeoTagging
 - Social Media

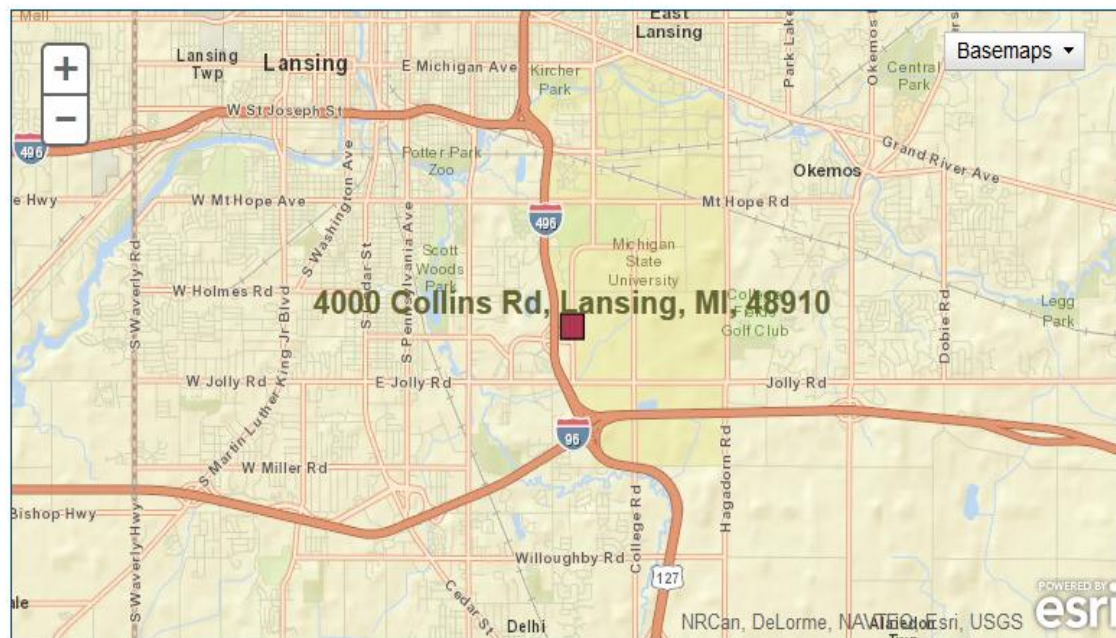




Activity Log

Incident: MI CIMS Training

Details

Date/Time: EM Program: Region: Activity Type: Priority: Point of Contact Name: Contact Number: Map Label: Address/Location: Lat/Long: / 



Activity Log

Incident: MI CIMS Training

Details

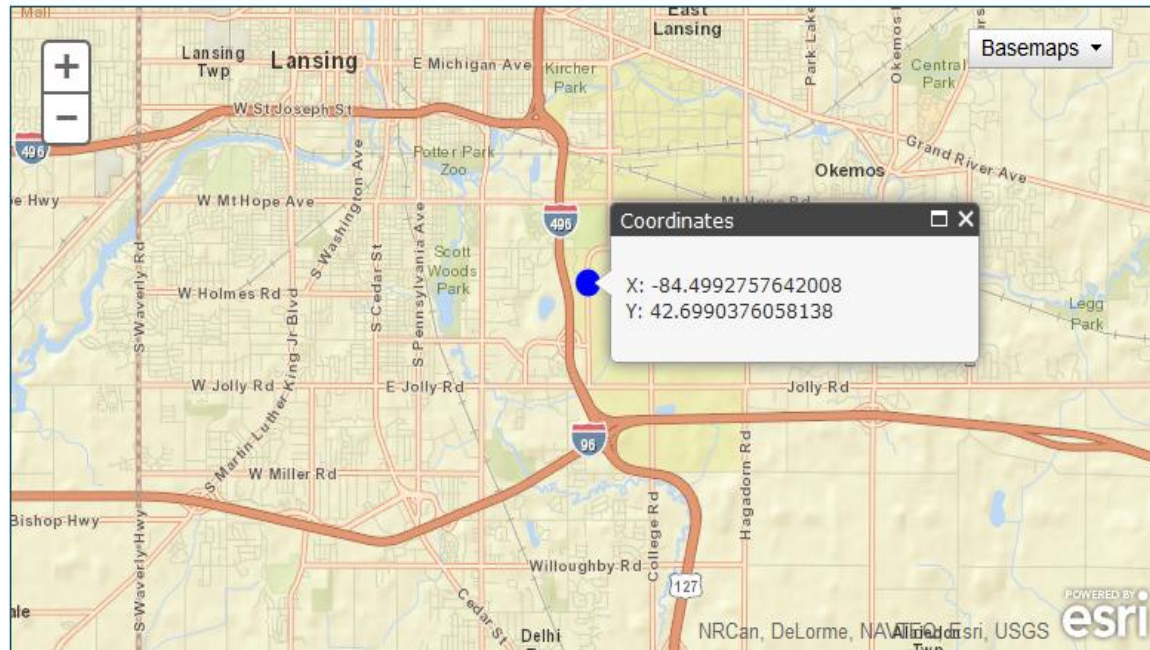
Date/Time: 6/3/2013 16:23:03

EM Program: Region: Activity Type: Priority: Point of Contact Name: Contact Number: Map Label:

Address/Location: 3268 Collins Rd, East Lansing, MI

Geocode

Lat/Long: 42.6990376058138 / -84.4992757642008





Activity Log

Incident: MI CIMS Training

Details

Date/Time:

EM Program:

Region:

Activity Type:

Priority:

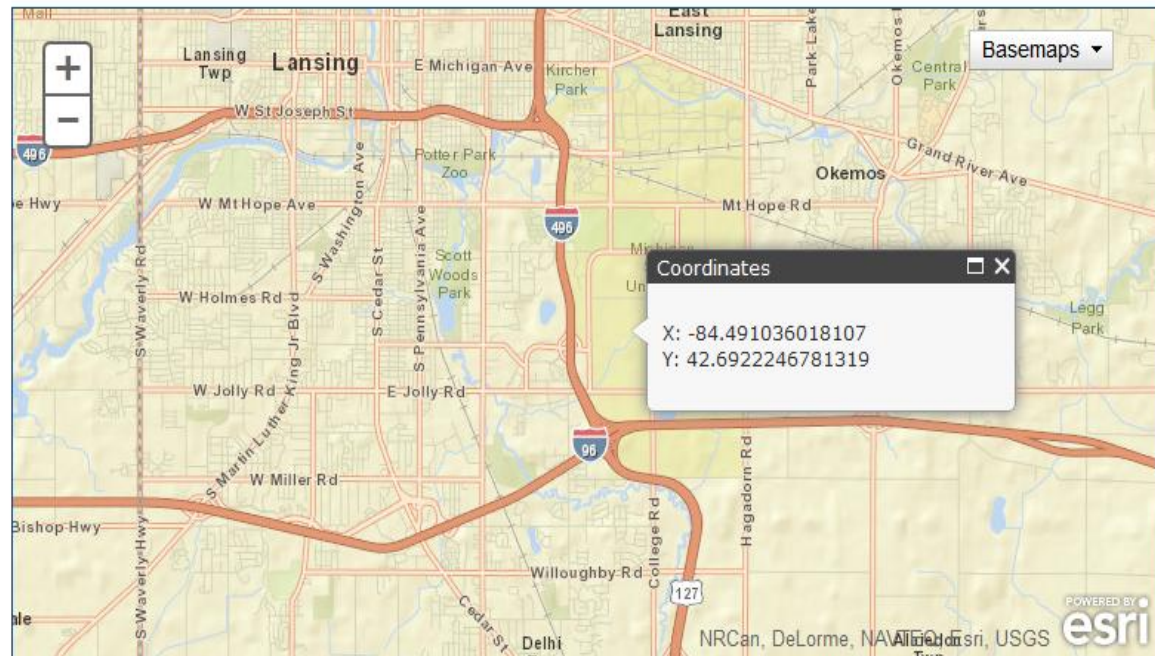
Point of Contact Name:

Contact Number:

Map Label:

Address/Location:

Lat/Long: /



GIS and Emergency Management

- MSP GIS Role
- Emergency Preparedness
- Disaster Management
- Post Incident



MSP EMHSD GIS Role

- SEOC
 - Situational Awareness
 - Create GIS based common operating picture (COP)
 - Assist communication and collaboration among departments and agencies
 - Management of resources
 - Provide access to live data feeds and other geo processing tools



Emergency Response

- Supporting SEOC with GIS
 - Track resources
 - Show general information on map
 - Visualize affected populations and shelter locations
 - Maintain incident status and damage assessment info
 - Provide maps for community leaders and decision makers



Radiological Emergency Preparedness Program

- Nuclear Power Plants
 - 6 FEMA required maps for each nuclear power plant
 - Standardize maps & develop symbology
 - Access Control Points, Evacuation Routes, Population, 10 & 50 Mile Emergency Planning Zones & Protective Action Areas, Reception, Decontamination, & Congregate Care Centers



10 Mile EPZ & Protective Action Areas Enrico Fermi II Nuclear Power Plant



Legend

2.5 1.25 0 2.5 Miles

Produced by: Michigan State Police Emergency Management and Homeland Security Division
July 2, 2009
Coordinate System: Michigan GeoRef. NAD83 meters
Data Source: Basemap data from Michigan Geographic Framework, Version 9
All power plant related data from Michigan State Police Emergency Management and Homeland Security Division



Emergency Preparedness

- Data management - Gather & store information, GIS data, resource plans, databases, etc.
 - What are your data needs?
 - Rest Endpoints
 - FEMA
 - NOAA
 - ESRI
 - `inurl:rest/services`



Emergency Preparedness

- Situational awareness – GIS links people, processes & information
 - Create GIS based common operating picture (COP)
 - Assist communication and collaboration among departments and agencies
 - Management of resources
 - Provide access to live data feeds and other geo processing tools



During Incident

- Imagery Requests (USGS)
 - Hazard Data Distribution System (HDDS)
 - Create an account
 - Serious Incident
 - Local Declaration with possibility of Statewide
 - Ex. Flooding in April
 - **Only used for Incident**



During Incident

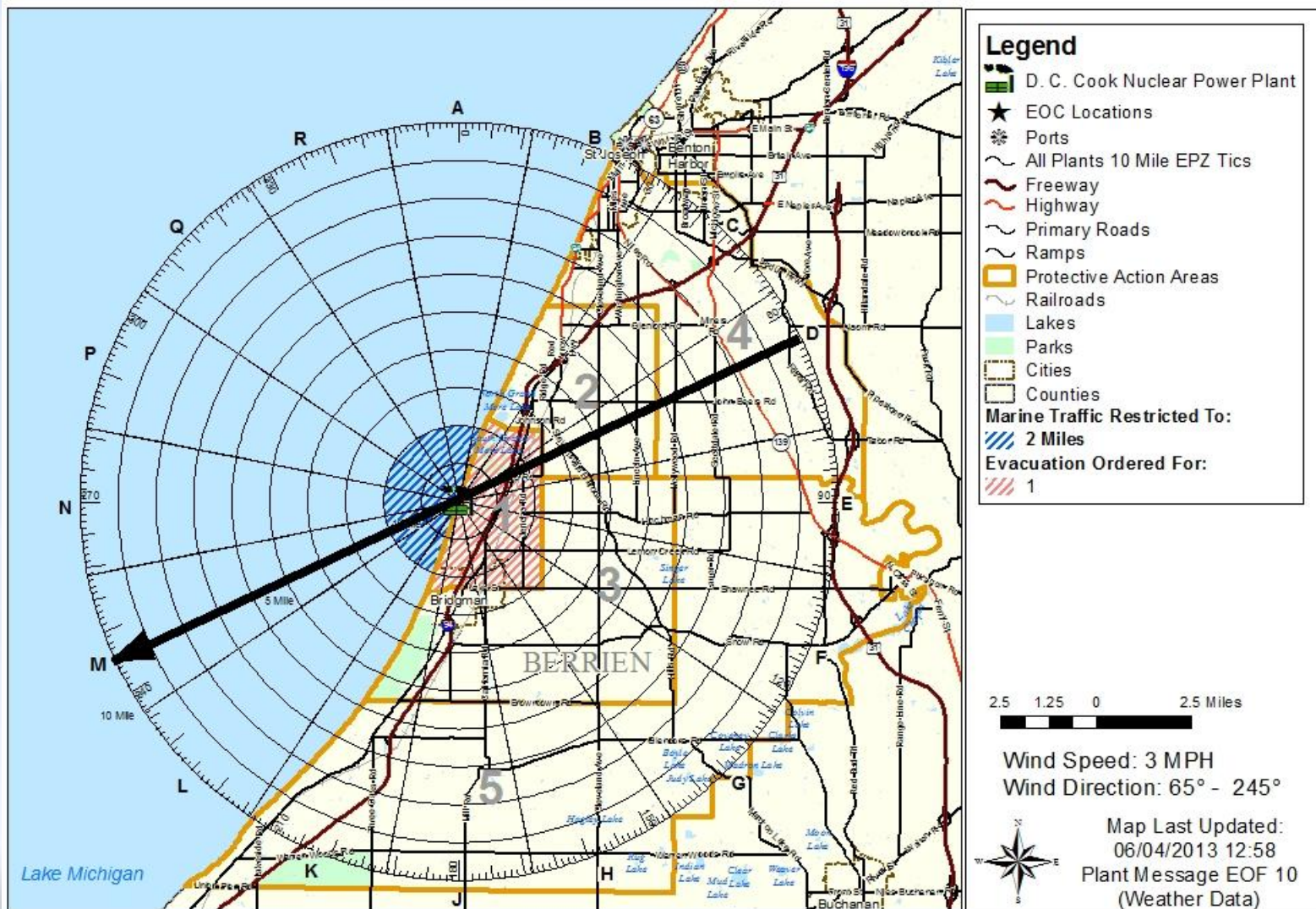
- Imagery Requests (USGS)
 - Process
 - Area of Interest
 - Contact USGS
 - 15km swath width
 - Download through HDDS
- Support
 - Support Locals



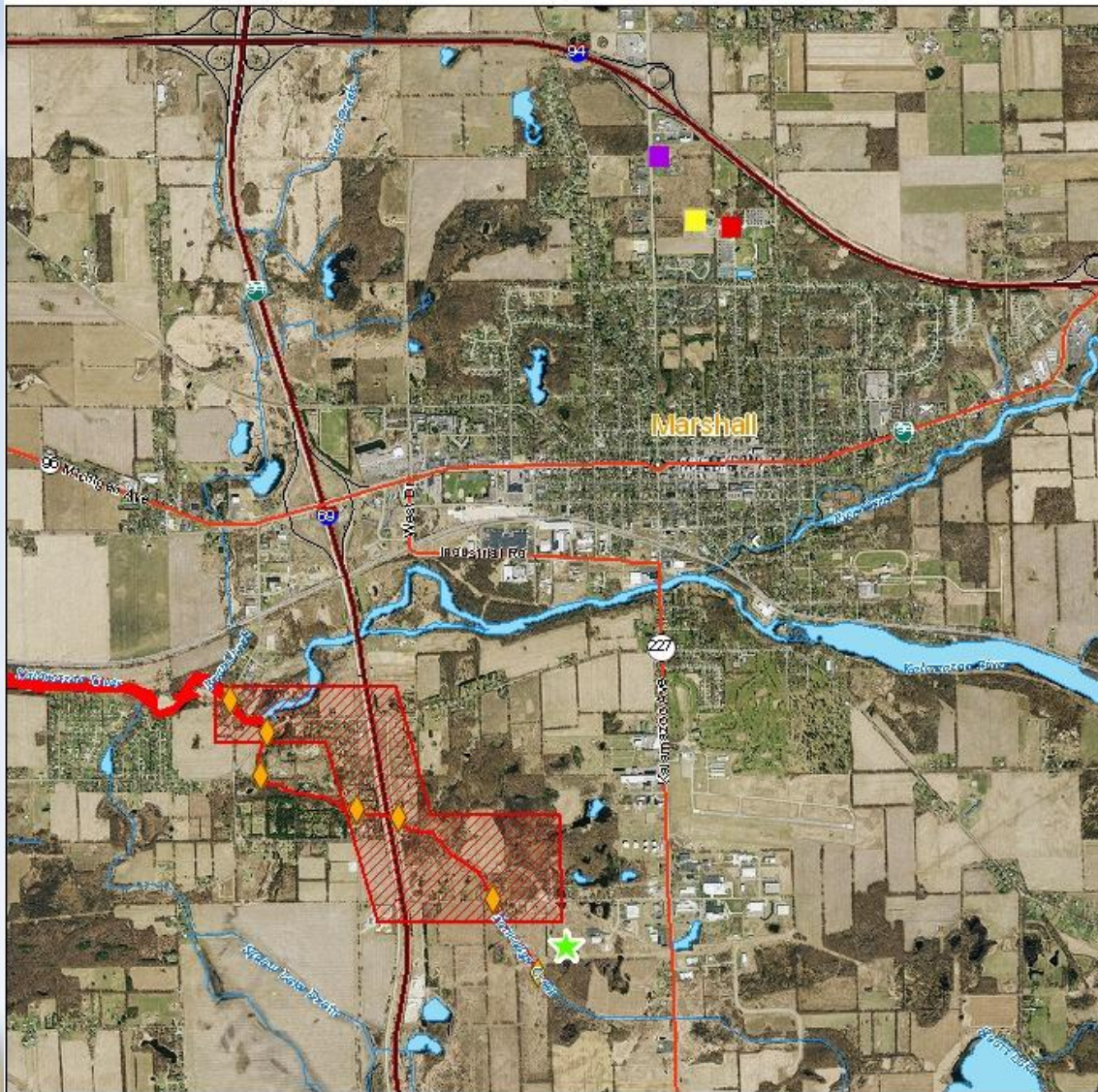
EXERCISE

D.C. Cook Nuclear Power Plant Protective Action Areas & 10 Mile EPZ

EXERCISE



Kalamazoo River / Enbridge Spill - July 27- August 16, 2010



Legend

- Booms
- Oil Spill Origin
- EOC / ICP / JIC
- Media Center
- Wildlife Rehab Center
- Affected River Area
- Evacuation



0 0.3 0.6 1.2 Miles



Map Updated:
August 16, 2010 0800 hrs
MSP/EMHSD

Data Source:
E Team, EPA and Enbridge Energy Partners
Boom data as of August 8, 2010 Afternoon



Post Incident

- Damage Assessment
 - Geotagging
 - EXIFReader (Javascript Library)
 - MI CIMS
- Support
- What can we do to improve?



MSP/EMHSD Contacts

Ms. Jaclyn Barcroft, MI CIMS Administrator

Phone: (517) 324-2385

BarcroftJ@michigan.gov

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Mr. Trevor Havelka, GIS Developer

Phone: (517) 333-2743

HavelkaT1@michigan.gov

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MIWebEOC@michigan.gov

